

April 3, 1928.

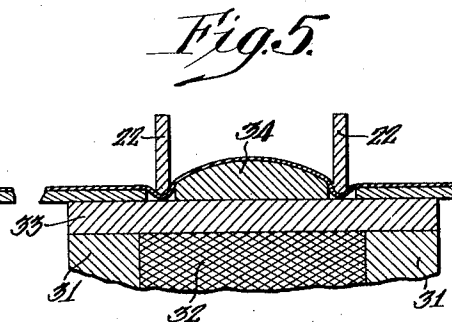
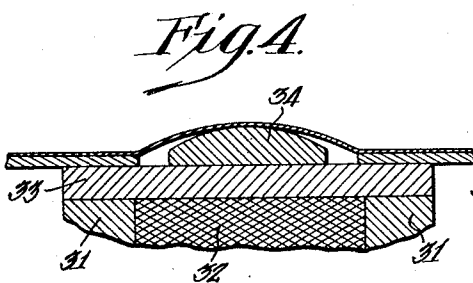
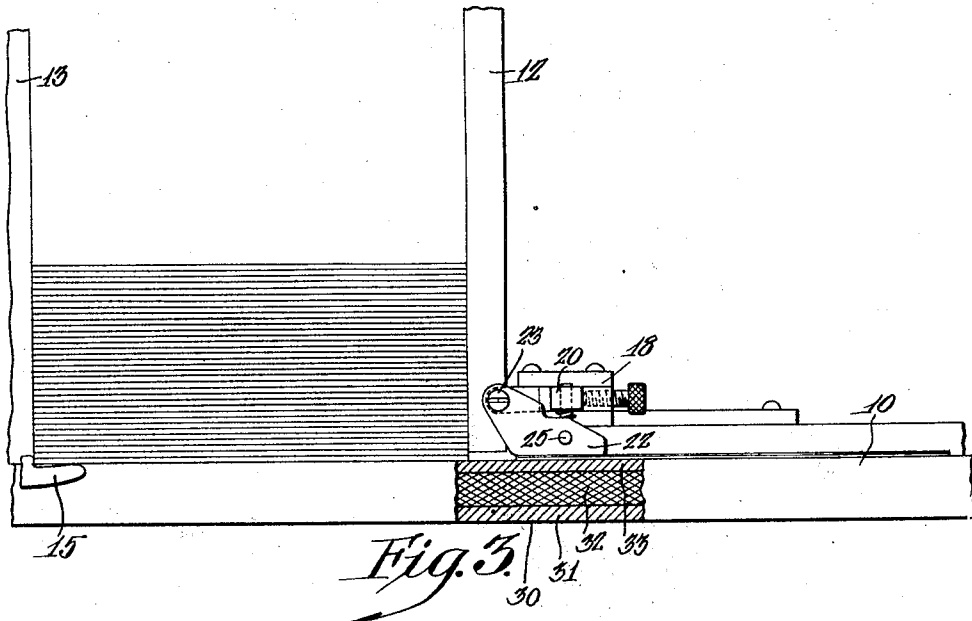
1,665,003

J. H. WEAVER

CASE FORMING ATTACHMENT

Filed Aug. 14, 1926

3 Sheets-Sheet 2



Witnesses

Walter Chism.

Wesley P. Merrill

Inventor:

J. Harry Weaver

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his Attorney.

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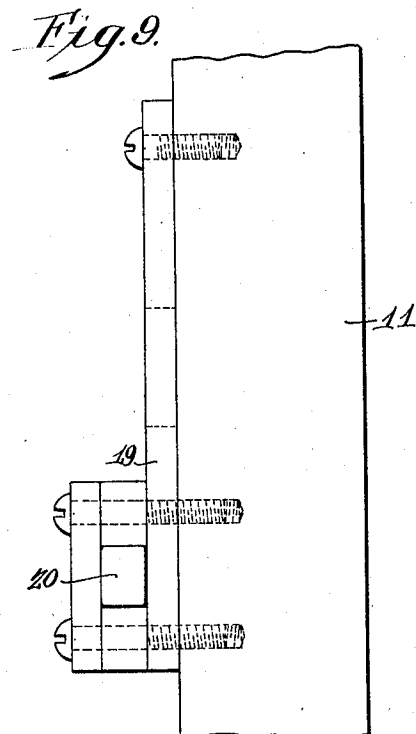
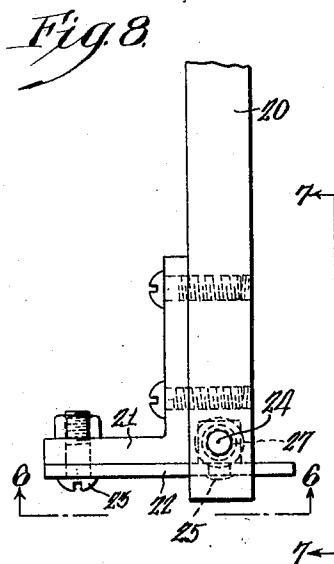
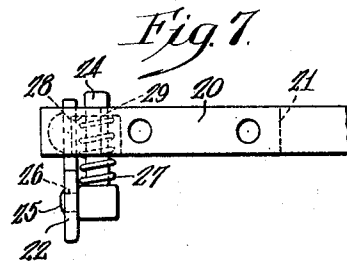
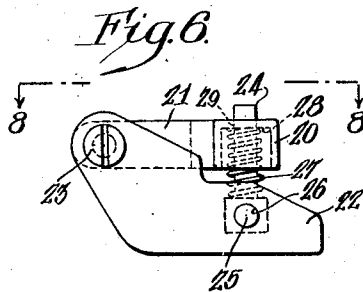
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

JOHN HARRY WEAVER, OF CAMDEN, NEW JERSEY, ASSIGNOR TO JESSE SATENSTEIN,
OF CAMDEN, NEW JERSEY.

CASE-FORMING ATTACHMENT.

Application filed August 14, 1926. Serial No. 129,169.

My invention relates to case forming attachments and more particularly to an attachment designed for use in conjunction with a casing-in machine of the type similar to that manufactured by the Smythe Manufacturing Company, Hartford, Connecticut.

In binding a book, the usual procedure in a large establishment is to first make the case, usually of a piece of fabric, two pieces of binder's board and one piece of backing paper, then to stamp the title and other lettering on the outside of the case, after which the case goes to a case back forming machine where the back of the case is rounded and creases formed on either side of the back, the cases are then taken to a casing-in machine and the operation finished.

The object of my invention is to eliminate the use of the case back forming machine, thus saving the cost of this operation, including the time spent in moving the cases to and from the machine and evening and squaring the stack of cases, as well as the cost of the machine.

A further object of my invention is to provide an attachment that is comparatively inexpensive to manufacture and which may be readily attached to a standard casing-in machine.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which

Figure 1 is a rear elevation of my invention as it would appear when attached to a casing-in machine,

Figure 2 is a partial plan view of the rear table of a casing-in machine on which my invention has been installed, taken on line 2—2 of Figure 1,

Figure 3 is a view taken on line 3—3 of Figure 2, the heating element being shown in cross section,

Figure 4 is a cross sectional view taken on line 4—4 of Figure 2, showing a case in place above the heating element,

Figure 5 is a view similar to Figure 4 but taken on line 5—5 of Figure 2 and showing the case after it has been creased,

Figure 6 is a view of one of the creasing fingers, taken on line 6—6 of Figure 2,

Figure 7 is a front view of same,

Figure 8 is a top view of the finger shown in Figure 6, and

Figure 9 is a side view showing the support bearing attached to the case guide.

As the casing-in machine forms no part of my invention only such parts have been shown in the drawings as is necessary to illustrate my invention.

Referring now more particularly to the drawings, 10 and 11 represent the case guides, 12 and 13 parts of the case magazine, and 14, 15, 16 and 17 fingers by which the cases are moved forward. The above elements are parts of a standard casing-in machine. Bearings 18 and 19 are secured to case guides 10 and 11 and are each provided with a transverse slot in which a support 20 is slidably mounted and held in adjusted positions, transversely of the casing-in machine, by means of a thumb screw threaded through the wall of the bearing. Secured to the inner end of each support 20 is an angle 21 on which a creasing finger 22 is rockably mounted by means of a screw 23. A shouldered pin 24, having a pin 25 secured to its enlarged portion and extending through an aperture 26 in finger 22, extends through an aperture 29 in support 20. A spring 27 encircles the reduced portion of pin 24 with one end abutting the shoulder of the pin and the other end retained in a recess 28 in the underside of support 20, whereby the finger 22 is yieldingly held against upward movement.

30 represents a heating unit consisting of a case 31, an electrical heating element 32 and a top plate 33. Removably secured on the heating unit is a back forming bar 34. A variety of bars are provided in order to accommodate cases of different sizes.

While an electrical element has been shown as the heating element, it will be readily understood that steam, hot water or other heating means could be substituted.

A casing-in machine normally operates as follows: The cases are brought from the case back-forming machine and stacked in the magazine where the stack is held in alignment by the magazine parts 12 and 13. Unbound books are placed by hand on saddles at the front of the machine which rotate horizontally and reciprocate vertically to subject each book to an application of paste and bring it into position to receive its cover. The fingers 14, 15, 16 and 17 grip the bottom case, carry it forward, and deposit it on the book to be bound.

With my attachment mounted on the machine, the operation would be as follows:

A back forming bar, of the right width for the cases to be formed, is mounted on the heating unit; the supports 20 are adjusted to bring the fingers 22 in position to form the crease, and a stack of unformed cases placed in the magazine. The back forming bar, being heated by the heating element, heats the bottom case and causes it to partially conform to the shape of the bar. As the fingers 14, 15, 16 and 17 grip the bottom case and thrust it forward, it passes under the creasing fingers 22, thereby forming the heated back of the case to the exact outline of the forming bar and forming creases in the case at either side of the rounded back, as plainly illustrated in Figures 4 and 5. The heating unit 30 and forming bar 34 extend from the rear of the magazine forwardly to a point adjacent the casing-in mechanism. As this operation coordinates with the casing-in operation, the fingers being adapted to take the cases from the magazine and place them on the filler which is to be bound, the forming and creasing of the back of the case is accomplished without the expenditure of time, labor, or power.

While I have illustrated and described my invention as including creasing fingers, it will be readily understood that rollers or other forms of creasing attachments could be used and that the supports may be attached to other parts of the machine than those specified. Other changes and modifications might be made without departing from the scope of the invention, hence, I do not limit myself to the preferred embodiment herein described, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

I claim:—

1. In a case back-forming attachment having a forming bar, means for creasing a case including a support mounted in a plane above the forming bar and disposed at right angles to said bar, creasing means swingably depending from the support, and a spring pressed member pivoted to the creasing means for holding said means downwardly against a case being fed thereunder.

2. In a case back-forming attachment having a forming bar, means for creasing a case including supports mounted in a plane above the forming bar and disposed at right

angles to said bar, creasing means swingably depending from the end of each support, a spring adapted to hold each creasing means downwardly against a case being fed thereunder, and means for moving the supports transversely of the forming bar.

3. A case back-forming attachment including a forming bar and bearings adapted to be mounted upon a machine, a support slidable in each bearing at right angles to the forming bar and provided with a bore and a recess, an angle bearing on each support, a creasing finger pivoted on each angle bearing, a pin pivotally connected to the finger and slidable in the bore, and a spring having one end disposed in the recess and encircling the pin.

4. In a case back-forming attachment having a forming bar, means for creasing a case including supports mounted in a plane above the forming bar and disposed at right angles to said bar, a bearing secured near the inner end of each support, creasing means carried by the bearings, pins rockably connected to the creasing means and slidable in the supports, and springs tending to hold the creasing means downwardly against a case being fed thereunder.

5. In a case back-forming attachment having a forming bar, means for creasing a case including supports mounted in a plane above the forming bar and disposed at right angles to said bar, a bearing secured near the inner end of each support, creasing fingers carried by the bearings, pins rockably connected to the creasing means and slidable in the supports, springs on the pins tending to hold the creasing means downwardly against a case being fed thereunder, and means for holding the creasing means in adjusted positions relatively to the side of the forming bar.

6. In a case back-forming attachment having a forming bar, means for creasing a case including bearings adapted to be mounted on a machine, supports adjustably mounted in the bearings and adapted to be moved toward or from the forming bar, creasing means depending from the supports, and springs engaging the creasing means and supports for holding said creasing means against a case being fed longitudinally of the forming bar.

In testimony whereof I have signed my name to this specification.

J. HARRY WEAVER.